
January 2007

MILITARY BASE CLOSURES

Opportunities Exist to Improve Environmental Cleanup Cost Reporting and to Expedite Transfer of Unneeded Property



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Highlights of GAO-07-166 a report to congressional committees

January 2007

MILITARY BASE CLOSURES

Opportunities Exist to Improve Environmental Cleanup Cost Reporting and to Expedite Transfer of Unneeded Property

Why GAO Did This Study

The cleanup of environmental contamination on unneeded property resulting from prior defense base realignment and closure (BRAC) rounds has been a key impediment to the transfer of these properties and could be an issue in the transfer and reuse of unneeded property resulting from the 2005 BRAC round. GAO's analysis of available data indicates that, when completed, the cleanup for the four prior BRAC rounds is expected to cost about \$13.2 billion and additional costs will be needed for BRAC 2005 property. These costs reduce BRAC savings, especially in the short term.

Because of broad congressional interest in BRAC, GAO prepared this report under the Comptroller General's authority to conduct evaluations on his own initiative. GAO's objectives were to examine costs to clean up 2005 BRAC properties, progress in transferring prior BRAC rounds properties to other users, and opportunities to expedite cleanups and transfers. To address these issues, GAO analyzed cleanup cost estimates, interviewed environmental officials and visited seven bases.

What GAO Recommends

GAO is recommending that DOD improve its reporting of BRAC environmental cleanup costs to Congress and share lessons learned in the use of all available tools to clean up and transfer property. DOD partially concurred with GAO's recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-07-166.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Brian Lepore (202) 512-4523 or leporeb@gao.gov.

What GAO Found

While expected environmental cleanup costs for unneeded property arising from the 2005 BRAC round are not yet fully known, Department of Defense (DOD) data indicate that about \$950 million will be needed to clean up these bases, adding to the estimated \$13.2 billion total cleanup cost for the prior rounds. Although DOD's cleanup program has matured compared to prior BRAC rounds, there are still many unknowns and the cleanup estimate for the 2005 round should be considered preliminary. In fact, environmental cleanup costs are likely to increase as more intensive environmental investigations are undertaken, additional hazardous conditions are discovered, and future reuse plans are finalized. Furthermore, Congress does not have full visibility over the total cost of DOD's BRAC cleanup efforts because none of the four reports DOD prepares on various aspects of environmental cleanup present all types of costs—past and future—to complete cleanup at each base. Compiling a complete picture of all costs requires extracting information from multiple reports, as GAO has done to estimate the total cleanup cost for the four prior BRAC rounds. More complete and transparent cost information would assist Congress in conducting its oversight responsibilities for this multibillion dollar effort.

While GAO's analysis shows that DOD continues to make progress in transferring over 502,500 acres of unneeded property from the four prior BRAC rounds—78 percent of the acres have now been transferred compared to 72 percent 2 years ago—over 112,300 acres remain untransferred. Comparatively, a total of about 102,000 acres are potentially transferable as a result of the 2005 BRAC round. Impediments to transfer continue to be related primarily to a variety of interrelated environmental cleanup issues, including limited technology to address unexploded ordnance and prolonged negotiations on compliance with environmental regulations.

Opportunities exist to expedite the cleanup and transfer of unneeded 2005 BRAC properties compared with other BRAC rounds. Congress provided DOD with a wide range of property transfer authorities for prior BRAC rounds. In the past DOD did not use some tools as much as others out of deference to community land reuse plans. For example, low- and no-cost transfer tools accounted for 65 percent of all acres transferred, whereas public and negotiated sales accounted for 5 percent. DOD's March 2006 guidance now encourages the services to make full use of all tools for transferring properties resulting from both the 2005 and prior-year BRAC rounds. The services have processes in place to monitor their progress to clean up and transfer BRAC properties, but they are not required to report periodically to the Office of the Secretary of Defense on their successes and challenges in using various transfer authorities. Collectively, such lessons learned could help others expedite the cleanup and transfer of unneeded properties by maximizing the use of all available tools, thereby accelerating the economic benefits of property reuse to communities while also saving the ongoing caretaker costs being incurred by DOD for unneeded properties.

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Abbreviations

BRAC	base realignment and closure
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
OSD	Office of the Secretary of Defense
SARA	Superfund Amendments and Reauthorization Act
UXO	unexploded ordnance

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**United States Government Accountability Office
Washington, DC 20548**

January 30, 2007

Congressional Committees

The cleanup of environmental contaminants, such as hazardous chemicals or unexploded ordnance (UXO),¹ found on bases closed under the base realignment and closure (BRAC) process has historically been a key impediment to the expeditious transfer of unneeded property to other federal and nonfederal parties who can put the property to new uses. While the Department of Defense (DOD) is obligated to ensure that former base property is cleaned up to a level that is protective of human health and the environment, the cleanup process can delay redevelopment in neighboring communities adversely impacted by the BRAC process. Our analysis of DOD data indicates that the estimated total cost to clean up environmental contaminants found on installations affected by the four prior BRAC rounds² is approximately \$13.2 billion, and while most of this cost has already been incurred, the cleanup process is expected to continue for many years at some closure sites. Environmental cleanup of unneeded property arising from the 2005 BRAC round closures will add additional costs. Cleanup costs, combined with additional caretaker costs DOD continues to incur for untransferred properties, cause some offset to projected net savings from BRAC with the greatest impact occurring in the short term.

This report is one in a series of reports we have issued on DOD environmental cleanup liabilities and property transfer issues that relate to the BRAC process. (See app. V for a list of key prior GAO reports.) Our prior work³ showed that, as of September 30, 2004, DOD had transferred about 72 percent of over 504,000 acres of unneeded BRAC property from the prior rounds to other entities for reuse, but about 140,000 acres of unneeded DOD property had not been transferred at that time, primarily

¹UXO refers to ordnance that remains unexploded either through malfunction or design and can injure personnel or damage material. Types of UXO include bombs, missiles, rockets, artillery rounds, ammunition, or mines and is sometimes referred to as munitions and explosives of concern.

²BRAC rounds were conducted in 1988, 1991, 1993, and 1995.

³GAO, *Military Base Closures: Updated Status of Prior Base Realignments and Closures*, GAO-05-138 (Washington, D.C.: Jan. 13, 2005).

because of issues related to environmental cleanup. Further, we reported that estimated costs for environmental cleanup at sites from the prior BRAC rounds remained within the range of prior estimates, but those costs could increase if unknown or undetermined future cleanup responsibilities, such as additional unexploded ordnance or other harmful contaminants, emerged.

Because of the broad congressional interest in the BRAC process, we prepared this report under the Comptroller General's authority to conduct evaluations on his own initiative to examine (1) potential environmental cleanup costs for 2005 BRAC properties, including an examination of how these costs are reported for all BRAC properties; (2) DOD's progress, since our prior work in 2005, to transfer unneeded properties from the four prior BRAC rounds; and (3) possible opportunities for DOD to expedite the cleanup and transfer of unneeded BRAC properties. This report is addressed to you because of your role in the oversight of DOD's infrastructure and BRAC implementation actions.

To examine the potential cost to clean up unneeded properties resulting from the 2005 BRAC round, we analyzed various DOD reports submitted to Congress on the environmental cost of cleanups at military bases in general, and interviewed DOD and military service officials familiar with the environmental cleanup process at military bases for clarification of these reports as well as the cleanup process as it affects BRAC bases. We visited four bases identified for closure in the 2005 BRAC round that reportedly have environmental cleanup needs—Fort Monroe, Hampton, Virginia; Umatilla Chemical Depot, Hermiston, Oregon; Brunswick Naval Air Station, Brunswick, Maine; and the Mississippi Army Ammunition Plant, Picayune, Mississippi. To assess DOD's progress in transferring properties from the four prior BRAC rounds since our prior work in 2005, we analyzed the Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress and collected property transfer information from the cognizant offices in each of the military services. Although we found some discrepancies, we concluded that overall the DOD data were sufficiently reliable for the purposes of this report. To assess opportunities for DOD to expedite cleanup and transfer of unneeded properties due to environmental hazards, we reviewed the laws, regulations, and policies governing the cleanup and transfer of properties. We also visited three BRAC bases from the prior BRAC rounds—which represent the three bases with the most expensive estimated costs to complete environmental cleanup—and interviewed local community property reuse officials as well as military environmental cleanup specialists to obtain their perspective on cleanup and property transfer issues. The bases we visited

were the former Fort Ord, Marina, California; the former McClellan Air Force Base, Sacramento, California; and the former Alameda Naval Air Station, Alameda, California. We also interviewed officials representing federal and state environmental regulatory agencies for their perspective on DOD cleanup activities and any opportunities for DOD to expedite the cleanup and property transfer process while adhering to cleanup standards and regulations. We conducted our work from January 2006 through November 2006 in accordance with generally accepted government auditing standards. Further details on our scope and methodology can be found in appendix I.

Results in Brief

While expected environmental cleanup costs for bases scheduled for closure as a result of the 2005 BRAC round are not yet fully known, DOD's data indicate that about \$950 million will be needed to complete these cleanups, adding to the estimated \$13.2 billion required for the prior BRAC rounds. About \$590 million of DOD's \$950 million for the 2005 round is attributable to estimated cleanup costs at 25 expected major base closures⁴ consisting of about 102,000 acres⁵ of potentially transferable properties. The remaining \$360 million is attributable to DOD's estimated cleanup costs for minor base closures.⁶ However, these estimates should be viewed as preliminary. Although DOD's cleanup program for known environmental contamination has matured compared to that of prior BRAC rounds, the full extent of cleanup requirements and associated costs for the 2005 round is likely to increase as more intensive environmental investigations are undertaken, additional hazardous conditions that may exist are found, and future reuse plans are finalized. In addition, DOD's munitions cleanup program is in its early stages, and the expected costs at many cleanup sites are not well defined or included in DOD's estimates, at this time. DOD is in the process of further identifying its cleanup requirements, but it may be several more years before more precise cost

⁴DOD defines a major closure as one where the installation's plant replacement value exceeds \$100 million. Included in this figure is the Navy's Broadway Complex in California, which was to be a major closure if the Navy did not enter into a long-term lease to redevelop the Complex before January 1, 2007. The Complex was leased to a private firm in November 2006 and thus will not close.

⁵This figure includes acreage at three chemical demilitarization bases slated for closure—Deseret Chemical Depot, Utah; Newport Chemical Depot, Indiana; and Umatilla Chemical Depot, Oregon.

⁶DOD defines minor closures as those installations with plant replacement values of less than or equal to \$100 million.

estimates are available. Furthermore, Congress does not have full visibility over the total cost of DOD's BRAC cleanup efforts because DOD does not, nor is it required to, present all types of costs—past and future—needed to complete the environmental cleanup at each BRAC installation in any one report, and because DOD does not fully explain the scope and limitations of the costs it does report. Transparency and accountability in financial reporting and budgeting are essential elements for providing Congress a complete picture of the total cost of BRAC environmental cleanups to make appropriate budgetary decisions. DOD prepares at least four different reports for Congress on the status and cost of environmental cleanup for each military base, including BRAC bases. Each report is designed to serve a different purpose, such as budgetary, financial, and program oversight, resulting in various presentations of estimated and actual cleanup costs. However, none of the reports provides the total expected cost—both the costs incurred to date as well as expected future costs—for environmental cleanup by installation. In order to get a more complete picture of cleanup costs, our analysis involved an in-depth examination of multiple DOD reports.⁷ In the absence of one report that presents all environmental cleanup costs and estimates for each military base, Congress will continue to be presented with a varying array of information. More complete and transparent cost reports would assist Congress in carrying out its oversight responsibilities for the multibillion dollar BRAC environmental cleanup effort. In order to provide more complete and transparent cost information for the environmental cleanup of unneeded properties from all BRAC rounds, we are recommending that DOD report all types of cleanup costs—past and expected future—required to complete environmental cleanup at each BRAC installation and fully explain the scope and limitations of the environmental cleanup costs it currently presents to Congress.

⁷Our analysis compiled from multiple DOD reports indicates that for the first four BRAC rounds \$9.0 billion has been made available for the environmental cleanup—restoration and munitions cleanup, compliance, and program management and planning—through fiscal year 2005, and that after fiscal year 2005 an estimated \$4.2 billion more would be required to complete the cleanup, for an overall total of \$13.2 billion. Similar information has not been compiled as yet for cleanup costs for the 2005 BRAC round.

Although our analysis shows that DOD continues to make progress in transferring⁸ the over 502,500 acres⁹ of unneeded property resulting from the four prior BRAC rounds—78 percent (about 390,300 acres) has now been transferred compared to 72 percent (about 364,000 acres) 2 years ago—about 112,300 acres remain untransferred, and the cleanup of environmental contamination remains a key impediment. Environmental cleanup issues are unique to each site but cleanup delays, when they occur, usually result from a variety of interrelated factors, including limited available technology to address unexploded ordnance (UXO) cleanup issues, prolonged negotiations over how to comply with environmental regulations, and discovery of previously unknown and therefore unaddressed environmental hazards.

Opportunities exist to expedite the cleanup and transfer of unneeded 2005 BRAC properties. Over the years, Congress has provided DOD with a wide range of property transfer authorities to expedite the cleanup and transfer of unneeded BRAC property, including public sales and the so-called “Early Transfer Authority,”¹⁰ which allows property to be transferred under certain conditions before all necessary cleanup actions have been completed. In prior BRAC rounds, DOD did not use some tools as often as others, such as public and negotiated sales, because DOD wanted to give a high priority to each community’s property reuse plans when disposing of unneeded BRAC properties. As of September 30, 2006, low or no-cost transfer tools such as public benefit, conservation, and economic development conveyances accounted for 65 percent of all acres transferred to nonfederal entities, whereas public and negotiated sales accounted for 5 percent. However, DOD’s guidance on implementing the 2005 BRAC round suggests that more recent experience indicates that a broader range of approaches may now succeed where they would not have worked in the past. For example, at the former Alameda Naval Air Station, California, agreement was reached in 2000 to transfer some of the

⁸For the purposes of this report, the term transfer refers to property that has been deeded to another user; it does not include leased property. Transfer data represent the best available data provided by each of the services as of September 30, 2006.

⁹In 2005, we reported approximately 72 percent of 504,000 unneeded acres were disposed of by DOD. This unneeded acreage differs from the approximate 502,500 acres currently reported because as property is transferred, more accurate surveys are being completed, which changes the amount of available acres from one year to another. Further, some acreage initially declared excess has been retained by DOD, thus decreasing the acreage available for transfer.

¹⁰Pub. L. No. 104-201, § 334 (1996).

installation's property using a no-cost economic development conveyance, but because of a subsequent decline in the economy, the local redevelopment authority could not meet the terms of the conveyance method (i.e., to create employment), and the Navy was reassessing its property transfer options, to include public sales, at the time of our review.

DOD's March 2006 *Base Redevelopment and Realignment Manual* encourages the services to make full use of all available property transfer tools for both the 2005 BRAC as well as prior BRAC round bases. Each of the military services has processes in place to monitor its progress to clean up and transfer BRAC properties. For example, along with a system to track property transfers, Army environmental personnel meet about every 6 months to informally discuss cleanup funding requirements and property transfer issues. However, the Office of the Secretary of Defense does not require the services to periodically report on their progress and challenges in transferring unneeded BRAC properties, or lessons learned in the application of various tools available to them, which collectively might provide more information and maximize the services' efforts to accelerate the cleanup and transfer of remaining as well as new 2005 BRAC properties. Without such a requirement, oversight of the services' compliance with the new BRAC guidance could be more limited than is desirable if one objective is to enhance opportunities for exploiting lessons learned from the experience of other BRAC bases. Ultimately, as long as unneeded properties remain in DOD possession, communities are denied the full economic benefit of property reuse and DOD continues to incur ongoing caretaker costs. In order to ensure that the military services are taking full advantage of all property cleanup and transfer mechanisms, we are recommending that DOD require the military services to periodically report to the Office of the Secretary of Defense actions both planned and taken to make full use of the transfer authorities available to them in the interest of expediting the property transfer process and sharing lessons learned.

In written comments on a draft of this report, DOD concurred with the fundamental aspects of both of our recommendations. DOD partially concurred with our first recommendation because it did not agree with our suggestion to include full cleanup cost information in the annual BRAC budget justification documentation, but wanted to find another vehicle for reporting the information. Nonetheless, DOD concurred with our basic recommendation for DOD to report all costs required to complete environmental cleanup at each BRAC installation and to fully explain the scope and limitations of these costs to Congress. DOD

concurred with our second recommendation to require the military services to periodically report to the Office of the Secretary of Defense on the status and proposed strategy for transferring BRAC properties including an assessment of the usefulness of all tools at their disposal.

Background

DOD has undergone five BRAC rounds with the most recent occurring in 2005. Under the first four rounds in 1988, 1991, 1993, and 1995, DOD closed 97 major bases and had 55 major base realignments¹¹ and hundreds of minor closures and realignments. DOD has reported that under the prior BRAC rounds it had reduced the size of its domestic infrastructure by about 20 percent and had generated about \$6.6 billion in net annual recurring savings for those years following the completion of the 1995 round in 2001. As a result of the 2005 BRAC decisions, DOD was slated to close an additional 25 major bases, complete 32 major realignments, and complete 755 minor base closures and realignments. At the time the BRAC decisions were finalized in November 2005, the BRAC Commission projected that implementation of these decisions would generate over \$4 billion in annual recurring net savings following the completion of implementing those decisions in 2011. In accordance with BRAC statutory authority, DOD must complete closure and realignment actions by September 15, 2011—6 years following the date the President transmits his report on the BRAC recommendations to Congress.¹² Environmental cleanup and property transfer actions can exceed the 6-year time limit, having no deadline for completion.

In addition to reducing unneeded infrastructure and generating savings, DOD envisioned the 2005 BRAC round to be one that emphasized transformation by aligning the infrastructure with the defense strategy and fostered jointness by examining and implementing opportunities for greater jointness across DOD. As such, there are a considerably higher number of realignments to take place than in any of the four prior rounds, which has resulted in far more individual BRAC actions, many of which affect multiple bases. While the number of major closures and realignments are somewhat similar to those of previous rounds (see table

¹¹DOD defines a “major base closure” as one where plant replacement value exceeds \$100 million. DOD defines “plant replacement value” as the cost to replace an existing facility with a facility of the same size at the same location, using today’s building standards. DOD defines a “major base realignment” as one with a net loss of 400 or more military and civilian personnel.

¹²Pub. L. No. 101-510, § 2904 (1990).

1), the number of minor closures and realignments is significantly greater than those in all previous rounds combined. Available data indicate that despite the larger number of actions associated with the 2005 BRAC round compared with previous rounds, the amount of property potentially available for transfer is likely to be much less than in prior BRAC rounds. Although the total amount of acres available for transfer resulting from the 2005 BRAC round is yet to be fully determined, the preliminary number of potentially transferable acres for the 25 major bases is about 102,000 acres¹³ compared with a total of about 502,500 acres from the prior BRAC rounds combined. The extent of additional transferable acreage arising from the hundreds of minor base closures and realignments was not available at the time of our review, but is likely to be limited given the smaller size of many of those locations.

Table 1: Comparison of BRAC 2005 Recommendations with Recommendations from Prior Rounds

Round	Major base		Minor base closures and realignments
	Closures	Realignments	
1988	16	4	23
1991	26	17	32
1993	28	12	123
1995	27	22	57
Total: prior BRAC rounds	97	55	235
Total: 2005 BRAC round	25	32	755^a

Source: DOD.

^a An individual base may be affected by more than one realignment.

A critical component to the process of transferring unneeded property arising from BRAC actions is the need to address the environmental contamination that has occurred over time due to military operations being conducted when the bases were active installations. Types of environmental contaminants found at military installations include solvents and corrosives; fuels; paint strippers and thinners; metals, such as lead, cadmium, and chromium; and unique military substances, such as nerve agents and unexploded ordnance. According to DOD officials, while

¹³This figure includes acreage at three chemical demilitarization bases slated for closure—Deseret Chemical Depot, Utah; Newport Chemical Depot, Indiana; and Umatilla Chemical Depot, Oregon.

environmental cleanup of these contaminants has been an ongoing process on active military bases, the cleanups often receive greater attention once a base has been selected for closure. Environmental cleanup is necessary for the transfer of unneeded contaminated property, which becomes available as a result of base closures and realignments. While addressing the environmental cleanup of contaminated property is a requirement for property transfer to other users, the sometimes decades-long cleanup process is not bound by the 6-year limitation for implementing required BRAC actions. As we have reported in the past,¹⁴ addressing the cleanup of contaminated properties has been a key factor related to delays in transferring unneeded BRAC property to other parties for reuse. DOD officials told us that they expect environmental cleanup to be less of an impediment during the 2005 round since the Department now had a more mature cleanup program in place to address environmental contamination on its bases.

In conducting assessments of potential contamination and to determine the degree of cleanup required (on both active and closed bases), DOD must comply with cleanup standards and processes under all applicable environmental laws, regulations, and executive orders. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended,¹⁵ authorizes cleanup actions at federal facilities where there is a release of hazardous substances or the threat of such a release which can present a threat to public health and the environment. To clean up potentially contaminated sites on both active and closed bases, DOD generally follows the process that is required under CERCLA, which generally includes the following phases and activities: preliminary assessment, site investigation, remedial investigation and feasibility study, remedial design and remedial action, and long-term monitoring. (An explanation of these phases is provided in app. II.)

The Superfund Amendments and Reauthorization Act of 1986¹⁶ (SARA) added provisions to CERCLA specifically governing the cleanup of federal facilities, including active military bases and those that are slated for closure under BRAC and, among other things, required the Secretary of

¹⁴GAO, *Military Base Closures: Progress in Completing Actions from Prior Realignment and Closures*, GAO-02-433 (Washington, D.C.: Apr. 5, 2002). See app. V for a list of key related prior GAO reports.

¹⁵42 U.S.C. § 9601–9630; Pub. L. No. 99-499, (1986).

¹⁶Pub. L. No. 99-499, § 120.

Defense to carry out the Defense Environmental Restoration Program (DERP).¹⁷ Following SARA's enactment, DOD established DERP, which now consists of two subprograms: (1) the Installation Restoration Program, which addresses the cleanup of hazardous substances that are primarily controlled under CERCLA and were released into the environment prior to October 17, 1986; and (2) the Military Munitions Response Program, which addresses the cleanup of munitions including UXO and the contaminants and metals related to munitions that were released into the environment prior to September 30, 2002. Cleanups of hazardous substances released after 1986 and munitions released after 2002 are not eligible for DERP funds. These cleanups are generally referred to as non-DERP or "compliance" cleanups and often include activities that are regulated by the Resource Conservation and Recovery Act. These cleanups involve the closure and cleanup of operations associated with landfills, training ranges, and underground storage tanks and are generally funded under base operations and maintenance accounts for active bases. Once the property is determined to be unneeded and transferable to other users under BRAC, the cleanups are funded under the BRAC account.

While SARA had originally required the government to warrant that all necessary cleanup actions had been taken before transferring property to nonfederal ownership, the act was amended in 1996 to expedite transfers of contaminated property.¹⁸ Now such property, under some circumstances, can be transferred to nonfederal users before all remedial action has been taken. However, certain conditions must exist before the department can exercise this early transfer authority, such as the property must be suitable for the intended reuse and the governor of the state must concur with the transfer.

In addition to investigations into potential hazards, DOD is required to follow National Environmental Policy Act requirements and consult with local redevelopment authorities¹⁹ during the process of property disposal and during the process of relocating functions from one installation to

¹⁷Pub. L. No. 99-499, § 211.

¹⁸The National Defense Authorization Act for Fiscal Year 1997, Pub. L. No. 104-201 § 334.

¹⁹According to the *Base Redevelopment and Realignment Manual*, dated March 1, 2006, a local redevelopment authority is any entity (including an entity established by a state or local government) recognized by the Secretary of Defense as the entity responsible for developing the redevelopment plan with respect to the installation or for directing the implementation of such a plan.

another. Although the decision to close or realign installations is not subject to the National Environmental Policy Act, DOD is required to follow the act's requirements during the process of property disposal and during the process of relocating functions from one installation to another. The National Environmental Policy Act requires federal agencies, including DOD, to consult with and obtain the comments of other federal agencies that have jurisdiction by law or special expertise with respect to any environmental impact involved with the action.

DOD's March 2006 *Base Redevelopment and Realignment Manual* requires the military services to prepare an Environmental Condition of Property Report for closing BRAC bases. The report is used to evaluate the environmental condition of all transferable property based on already available information on contamination. It can be used to identify "gaps" in information regarding environmental conditions and where more study is required. Environmental Condition of Property reports have replaced the former baseline surveys that were required when SARA was enacted in 1986. According to Army officials, the Army plans to have a total of 183 Environmental Condition of Property reports completed for all of its 2005 major and minor base closures by January 31, 2007. With respect to Army National Guard properties, the states will be responsible for their Environmental Condition of Property reports except for the five bases located on federal lands²⁰ for which the Army will prepare the reports, if required. According to Navy officials, the Navy has completed all reports for lands affected by 2005 closures. Air Force officials reported that they will have the reports completed for all their bases, which require one, by April 2007.

DOD has had a long-standing policy of not considering environmental cleanup costs in its BRAC decision making. Accordingly, the estimates using the Cost of Base Realignment Actions²¹ model, which is used to compare alternative actions during BRAC decision making, do not include the cost of environmental cleanup for BRAC-affected bases. Historically, we have agreed with DOD's position that such costs are a liability to DOD regardless of its base closure recommendations. While such costs are not

²⁰The five Army National Guard properties located on federal lands are Fort Chaffee Maneuver Training Center, Arkansas; National Guard Bell, California; Jackson Armory, Oregon; Oxford, Ohio; and the Army Aviation Support Facility, Wyoming.

²¹The Cost of Base Realignment Actions (COBRA) model is an analytical tool used to calculate the costs, savings, and return on investment of proposed realignment and closure actions.

included in the Cost of Base Realignment Actions model, they are included in developing BRAC implementation budgets and recorded as a BRAC cost.

Expected Environmental Cleanup Costs for the 2005 BRAC Round Are Not Yet Fully Known

Expected environmental cleanup costs for the 2005 BRAC round are not yet fully known, but they are likely to increase from current estimates. DOD's available data²² indicate that at least \$950 million will be needed to complete the cleanups now underway for known hazards on the major and minor bases scheduled for closure for the 2005 BRAC round. However, our prior work has indicated that as closures are implemented, more intensive environmental investigations occur and additional hazardous contamination may be uncovered resulting in higher cleanup costs. Also, the services' estimates were based on cleanup standards that are applicable for the current use of the property, but reuse plans developed by communities sometimes lead to more stringent and thus more expensive cleanups.²³ In addition, DOD is in the early phases of identifying and analyzing munitions hazards that may require additional cleanup at both active and BRAC bases. Furthermore, the manner in which DOD is required to report all these costs to Congress is fragmented. Of the four reports DOD annually provides to Congress on environmental cleanup costs and estimates for its bases, none gives the entire cost picture by service or base.

Cleanup Cost Estimates for BRAC 2005 Round Bases Are Not Fully Known and Likely to Increase

Although DOD data indicate that at least \$950 million will be needed for cleanup of the major and minor base closures resulting from the 2005 BRAC round, this figure reflects preliminary amounts that are likely to increase as more information is collected during BRAC implementation on the extent of cleanup required to safely reuse property in communities where future land use decisions have yet to be made. DOD's best available data suggest that at least \$590 million will be needed to complete the cleanup of the 25 major base closures and about \$360 million will be needed for the minor closures. These amounts were developed from information contained in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress*, and they do not include all costs,

²²*Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress.*

²³In commenting on a draft of this report, DOD officials emphasized that the *Base Redevelopment and Realignment Manual* states that DOD prefers that military department cleanup decisions be based on the current use of the property.

such as program management costs and non- DERP costs.²⁴ In addition, the 2005 BRAC round includes the closure of more than 100 reserve centers, the extent to which cleanups will be required and at what cost is largely unknown.²⁵ Only 2 of these centers reported cleanup estimates in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress*. Our experience with prior BRAC round bases has shown that estimates tend to increase significantly once more detailed studies and investigations are completed.

The following table provides DOD's estimated cost to complete the environmental cleanup beyond fiscal year 2006 for the 25 major DOD base closures resulting from the 2005 BRAC round as reported in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress*. For certain bases, conflicting cost estimates appear between this report and those reported in the *2005 Defense Base Closure and Realignment Commission Report to the President*.²⁶ According to DOD officials, the data provided to the BRAC Commission is now outdated and estimates contained in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress* provide more current data.

²⁴Non- DERP cleanups refer to those cleanups that are not eligible for Defense Environmental Program funds, i.e., cleanups of hazardous waste released after 1986 and cleanups of munitions released after 2002. DOD uses the term compliance to refer to these cleanups.

²⁵In commenting on a draft of this report, DOD officials stated that the majority of these facilities are small acreage, single buildings with limited operations.

²⁶See Appendix P of the *2005 Defense Base Closure and Realignment Commission Report to the President*.

Table 2: BRAC 2005 Major Closures' Estimated Environmental Cleanup Costs from Fiscal Year 2006 to Completion (in millions)

Service	Installation	Estimated cost
Army (12)	Fort Monroe, Virginia	\$201
	Deseret Chemical Depot, Utah	178
	Kansas Army Ammunition Plant, Kansas	23
	Selfridge Army Activity, Michigan	13
	Fort Gillem, Georgia	10
	Umatilla Chemical Depot, Oregon ^a	9
	Mississippi Army Ammunition Plant, Mississippi	8
	Fort McPherson, Georgia	7
	Riverbank Army Ammunition Plant, California	5
	Newport Chemical Depot, Indiana	5
	Fort Monmouth, New Jersey	5
	Lone Star Army Ammunition Plant, Texas	1
Navy (7)	Naval Weapons Station Seal Beach, Concord Detachment, California	85
	Naval Air Station Brunswick, Maine	16
	Naval Air Station Willow Grove, Pennsylvania	6
	Broadway Complex, California ^b	Not available ^c
	Naval Air Station Atlanta, Georgia	Not available ^c
	Naval Station Pascagoula, Mississippi	Not available ^c
	Naval Station Ingleside, Texas	Not available ^c
Air Force (6)	Galena Forward Operating Location, Alaska	12
	Brooks City Base, Texas	3
	Cannon Air Force Base, New Mexico ^d	2
	General Mitchell Air Reserve Station, Wisconsin	1
	Onizuka Air Force Station, California	0
	Kulis Guard Station, Alaska	Not available ^c
	Total	\$590

Source: GAO analysis of DOD Defense Environmental Restoration Program (DERP) data.

^aThe Army is funding a portion of the Umatilla Chemical Depot cleanup with prior BRAC round dollars.

^bThe BRAC Commission recommended that the Broadway Complex close if the Navy could not enter into a long-term lease to redevelop the property January 1, 2007. During the course of our review, the Navy announced they had entered into such a lease on November 22, 2006.

^cCleanup estimates were unavailable for these installations in the Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress because they received no DERP funds.

^dThe Cannon Air Force Base closure recommendation becomes effective if the Secretary of the Air Force does not designate a new mission for the installation by December 31, 2009.

Table 2 shows that DOD estimates it will spend at least \$590 million to clean up the 25 major bases recommended for closure in 2005. However, we believe that this figure is low for several reasons. First, the amounts in table 2 only include the cost estimate for DERP eligible cleanups—those cleanups associated with contamination occurring prior to 1986 for hazardous waste and prior to 2002 for munitions. The cost for non-DERP cleanups and program management costs are not included. These additional costs could add millions to the overall cost estimate. Second, no cleanup cost estimates were available in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress* for 5 of the 25 major base closures either because the cleanups were not eligible for DERP funding, or because the bases had not been thoroughly assessed for environmental damage. As the bases undergo more complete and in-depth environmental assessments, a clearer picture of environmental cleanup costs will likely emerge. Finally, these cost estimates will likely increase due to more in-depth investigations that are expected to address all environmental cleanup issues now that the bases have been scheduled for a BRAC closure. For example, during our visit to the Mississippi Army Ammunition Plant in June 2006, we noted that Army and contract officials were preparing an environmental condition of property assessment to pull together all known environmental issues. Army officials told us that the ammunition plant had been closed and placed in standby status since 1990 and that no aggressive environmental cleanup had taken place. When the plant was recommended for closure in 2005, the Army estimated that \$8.4 million would be required to address environmental contamination caused by 2 inactive range munitions sites. Since that time, according to Army plant officials, as many as 46 more sites have been identified as having environmental concerns which will require further investigation and possible cleanup. Therefore, the total eventual cleanup costs are likely to be much higher than the current estimate of \$8.4 million.

DOD officials told us that the projected environmental cleanup cost estimates are relatively lower for the 2005 BRAC bases than for those of the prior rounds because the environmental conditions on the property of today's bases are much better than those closed in previous rounds. These officials told us that this is primarily due to ongoing actions associated with DOD's Installation Restoration Program (cleanup program) and the Military Munitions Response Program at active and BRAC bases. The restoration program addresses hazardous substances, pollutants, and other contaminants, and the munitions program addresses UXO and discarded munitions. The officials stated that contaminated sites identified under the installation restoration program are much farther along in the cleanup process than sites identified under the munitions program,

primarily because the restoration program has been in existence since 1985 while the munitions program was only initiated in 2001. Our analysis of DOD-provided cleanup-phase²⁷ data for the identified contaminated sites at 20 of the 25 major BRAC 2005 closures supports this assertion. For example, DOD's data show that, as of September 30, 2005, 89 percent of the 571 installation restoration sites (508 sites) either had their cleanup remedy in place or had the remedy complete, and 91 percent (521 sites) had completed investigation studies. Comparatively, of the 50 identified munitions sites at the 20 bases, only 8 percent (4 sites) reported cleanup action complete and only 10 percent (5 sites) had completed investigation studies. However, federal cleanup officials as well as military environmental specialists told us that many of these sites may require further investigation and cleanup—and greater cleanup costs—if, as expected, the future control and use of the property shifts from the military to the private sector. Furthermore, DOD officials stated that many munitions sites were not required to be cleaned when they were operational ranges on active bases, but will require cleanup now that the bases have been closed. The Army estimates that the cost to address active ranges on their 2005 BRAC properties ranges from \$37 million to \$335 million and is not included in the \$950 million estimate for cleanup of 2005 major and minor bases.

DOD's Environmental Cleanup Reports Do Not Provide a Complete Picture of Environmental Cleanup Cost Information

Congress does not have complete visibility over the expected total cost of DOD's cleanup efforts for the 2005 BRAC round or for the prior BRAC rounds because of a variety of reports that individually are incomplete and which collectively may present a confusing picture of costs. Although DOD prepares multiple reports for Congress on various environmental cleanup costs, none of them presents an overall total cost estimate per base, nor is DOD required to present this information. DOD does not fully explain the scope and limitations of the cost information presented. Transparency and complete accountability in financial reporting and budgetary backup documents are essential elements for providing Congress with a more complete picture of the total cleanup costs so it can make appropriate budgetary trade-off decisions to ensure the expeditious cleanup and transfer of properties and ultimately realize savings for the U.S. government. In order to provide a complete picture of the total cleanup costs at BRAC bases, specific information must be extracted from various reports, which we have done in order to present the total costs to clean up properties resulting from prior BRAC round decisions.

²⁷See app. II for a description of DOD's environmental cleanup phases.

Congress annually receives the following four required reports²⁸ from DOD that contain environmental cleanup costs and estimates for BRAC bases, two of which also include costs for active bases.

- Annual BRAC Budget Appropriations Request²⁹
- Annual Government's Consolidated Financial Statement Report
- Annual Defense Environmental Programs Report
- Annual Section "2907" Report³⁰

A detailed description of the environmental cleanup costs and estimates included in these reports is presented in appendix III.

Our review showed that none of these reports provides information in one place on the total (spent plus estimated future environmental cleanup costs) expected for all environmental cost categories (DERP, non-DERP, and program management costs) by base. DOD officials told us that Congress will often mistakenly assume that the cost data presented in the Annual Defense Environmental Programs reports to Congress are the total expected cost of the program. While these costs are typically the majority of the overall total costs, the report excludes the cost of cleanups by base that do not qualify for DERP funding. Although these non-DERP costs are presented elsewhere in the report, they are only presented in aggregate terms by service. From information contained in two of the reports, we determined that the expected environmental costs for the first four BRAC rounds will total \$13.2 billion, as shown in table 3.

²⁸The report names listed are the names commonly used. The official titles of these reports are, *DOD Base Realignment and Closure Executive Summary and Budget Justification*, *Department of Defense Performance and Accountability Report*, *Defense Environmental Programs Annual Report to Congress*, and *Department of Defense Report on 2005 Defense Base Closure and Realignment Implementation*, respectively.

²⁹For the purposes of this report, we considered this information to be a report since it provides support information for the annual budget submission to Congress.

³⁰This reporting requirement refers to Section 2907 of Public Law 101-510.

Table 3: Total Expected Environmental Costs for Prior BRAC Rounds

Dollars in billions			
Cost category	Funds made available through fiscal year 2005	Estimated cost from fiscal year 2006 through completion	Total
DERP eligible ^a cleanups (Installation Restoration Program and Military Munitions Response Program)	\$ 9.0	\$ 3.8	\$ 12.8
Non-DERP cleanups (Compliance)	Included in cleanup amount	0.4	0.4
Program management and planning	Included in cleanup amount	Included in compliance amount	Included in compliance amount
Total	\$9.0	\$ 4.2	\$ 13.2

Source: GAO analysis of DOD's budget documentation for fiscal year 2005 and The Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress.

^aBRAC cleanups are funded from BRAC accounts within DOD's Military Construction appropriations. Cleanups of active bases are funded from DERP accounts for DERP eligible cleanups and Operation and Maintenance accounts for non-DERP cleanups. DOD continues to track DERP eligible cleanups by base even after closure (when the funding source has shifted to the BRAC accounts).

The \$9.0 billion of funding made available for the four prior BRAC rounds for all cost categories was obtained from DOD's BRAC Budget Appropriations Request for fiscal year 2005. The budget request did not provide data on the total cost to complete the environmental cleanup at the bases. The \$3.8 billion cost from fiscal year 2006 through completion for the DERP eligible cleanups (Installation Restoration Program and Military Munitions Response Program) came from one section (Appendix E, Restoration Budget Summary) in the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress*. On the basis of information in this report, the time required to complete the cleanup for some bases will take decades. For example, the estimated date to complete cleanup at the former Mather Air Force Base, California, is reported as 2074, and the estimated date to complete cleanup at the former Toole Army Depot, Utah, is reported as 2032. The \$0.4 billion estimated cost from fiscal year 2006 through completion for compliance (non-DERP) and program management and planning was extracted from another section of the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress* (specifically, Appendix J, Installation Restoration Program and Military Munitions Response Program Status Tables) for each of the services.

None of the environmental reports DOD submits to Congress provide information in one place on the total costs and future cost estimates for each of the environmental cost categories by service and by base. Further, the environmental cleanup costs and estimates DOD reports to Congress vary in their scope and limitations, but DOD does not fully explain their differences. As a result, the cost of cleaning up BRAC property lacks transparency and Congress does not have total visibility over this multibillion dollar BRAC environmental cleanup effort.

DOD Continues to Make Progress in Transferring Unneeded Properties, but Environmental Cleanup Continues to be a Key Impediment to Transfer of Remaining Properties

DOD Continues to Make Progress in Transferring Unneeded Properties

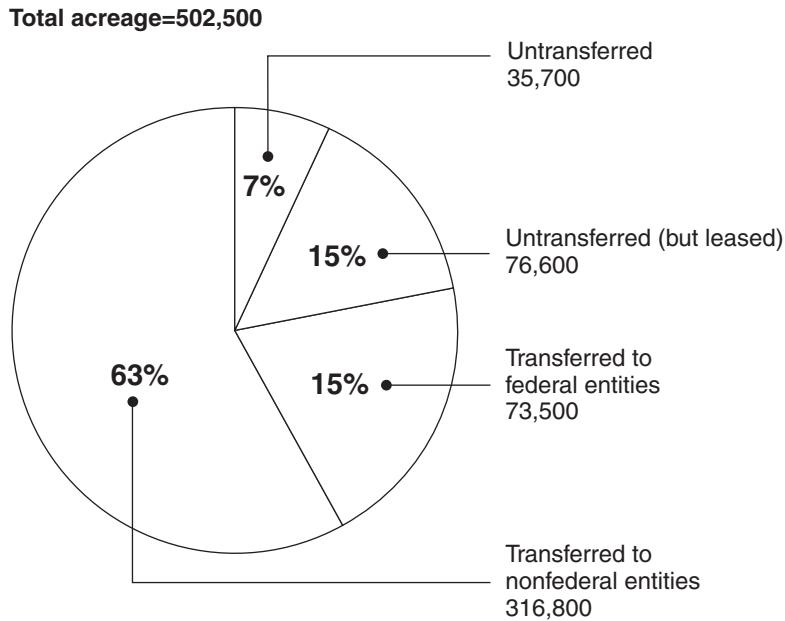
DOD continues to make progress in transferring unneeded BRAC property since our last report on this subject.³¹ However, environmental cleanup of contamination continues to be a key impediment to transferring the remaining properties. Environmental cleanup issues are unique to each site but usually result from a variety of interrelated factors such as technological constraints, lengthy negotiations on regulatory compliance, and the discovery of previously unknown and therefore unaddressed environmental hazards.

Since our last report on this subject in January 2005, DOD has made some progress in transferring remaining unneeded property, having transferred 78 percent, (about 390,300 acres) of the 502,500 total unneeded acres³² from prior BRAC rounds to federal and nonfederal entities—up from 72 percent (about 364,000 acres of the estimated 504,000 acres DOD reported at the end of fiscal year 2004) from 2 years ago. This represents an increase of about 26,300 acres from what we reported in January 2005. A breakdown of the current status of unneeded BRAC property shows that 63 percent had been transferred to nonfederal entities, 15 percent had been transferred to other federal agencies, 15 percent had been leased but not transferred, and 7 percent was untransferred and is awaiting future disposition (see fig. 1).

³¹In January 2005, we reported approximately 72 percent of 504,000 unneeded acres was transferred by DOD to other users. That acreage differs from the approximate 502,500 acres currently reported because as property is transferred, more accurate surveys are completed and acres figures change. Further, some acreage initially declared excess has been retained by DOD, thus decreasing the acreage available for transfer.

³²The unneeded acreage does not include over 23,000 acres at the Pueblo Chemical Depot, Colorado, which, although designated as unneeded, will not be available for further disposition until the chemical demilitarization mission at these bases is completed.

Figure 1: Disposition of Unneeded BRAC Acreage from Prior Rounds, as of September 30, 2006



Source: GAO analysis of DOD data.

Note: Figures do not add due to rounding.

Nearly 22 percent (112,300 acres)³³ of the total acreage from prior BRAC rounds—7 percent (35,700 acres) of untransferred property plus 15 percent (76,600 acres) of untransferred but leased property—has not been transferred. In other words, over 68 percent (76,600 acres) of the approximate 112,300 acres of untransferred property is being leased, leaving only 32 percent (35,700 acres) that is not in reuse. Leased property, while not transferred to the user, can afford the user and DOD some benefits. Communities, for example, can choose leasing while awaiting final environmental cleanup as an interim measure to promote property reuse and job creation. DOD also benefits, in some cases, as the communities assume responsibility for costs of protecting and maintaining these leased properties. By adding leased acres to the number of transferred acres, the amount of unneeded BRAC property in reuse rises to 93 percent. However, while leasing can provide short-term reuse

³³Of this amount, approximately 16,600 acres belong to the Air Force, 11,600 acres belong to the Navy, and about 84,000 acres are owned by the Army. Included in the Army acreage is about 50,000 untransferred acres at Jefferson Proving Grounds, Indiana, which is currently being retained by the Army and permitted to the U.S. Fish and Wildlife Service.

Cleanup of Environmental Contamination Continues to Cause Property Transfer Delays Due to a Variety of Interrelated Factors

benefits in terms of economic development opportunities, it may delay DOD's larger goal to expedite property transfers.

As we have reported in the past, environmental cleanup issues have and continue to delay the services from rapidly transferring unneeded BRAC property. As of September 30, 2006, about 81 percent of the approximate 112,300 acres remaining to be transferred from the prior BRAC rounds (about 91,200 acres), which is located on 44 installations, have environmental contamination issues. Environmental cleanup issues are unique to each site but usually result from interrelated issues such as technological constraints, cleanup negotiations, and previously unknown environmental hazards, as described in the following examples.

- Sometimes the available technology needed to detect and clean up UXO is limited and not fully effective. For example, at the former Naval Air Facility in Adak, Alaska, over 5,500 acres of UXO-contaminated property have not been transferred because the technology for economically cleaning up the UXO on this remote Aleutian island does not currently exist. At the former Fort Ord Army Base in Marina, California, about 11,800 acres contaminated with UXO still require cleanup, and this effort is currently expected to take until 2021 due to the labor-intensive nature of current cleanup technology (see fig. 2). We were told by DOD officials that the detection of UXO is not only labor intensive but difficult because the technology often used for this purpose cannot easily distinguish between UXO and waste scrap metals.

Figure 2: Workers Searching for UXO at the Former Fort Ord Using Hand-Held Detection Devices



Source: DOD.

- Prolonged negotiations between environmental regulators and DOD about compliance with environmental regulations and laws can delay property transfers. For example, at the former Fort Wingate, New Mexico, which was closed by the 1988 BRAC Commission and has about 8,800 acres of transferable property with environmental impediments, it took years of active negotiation between the Army and regulators to reach agreement for closure requirements permitted under the Resource Conservation and Recovery Act.³⁴ At the former Fort Ord, California, open burning of the coastal chaparral is necessary before discovery and removal of UXO and other munitions can begin. However, according to Army officials, the number of acres that can be burned annually must be negotiated with the state and is controlled by California's clean air standards.

³⁴The Resource Conservation and Recovery Act governs the generation, transportation, and management of hazardous wastes in order to protect human health and the environment.

- Additional environmental contamination can be detected after a base is recommended for closure. For example, the former McClellan Air Force Base in Sacramento, California, was recommended for closure in 1995 and traces of plutonium were found during a routine cleanup in September 2000, causing a cost increase of \$21 million, and extending the completion schedule beyond 2030.

Table 4 shows the most expensive “cost to complete” environmental cleanups on prior BRAC round bases. The estimated costs to complete cleanups at these 10 BRAC installations (\$2.1 billion) account for more than half (55 percent) of DOD’s \$3.8 billion future BRAC environmental restoration and munitions cleanup estimates for all unneeded properties on bases from the previous BRAC rounds.

Table 4: Top 10 Most Expensive Cost to Complete Cleanups at Prior Round BRAC Installations for Fiscal Year 2006 and Beyond (dollars in millions)

Service	Former military base	Estimated future cleanup costs
Air Force	McClellan Air Force Base, California	\$695.9
Army	Fort Ord, California	342.3
Navy	Alameda Naval Air Station, California	182.9
Army	Fort Wingate, New Mexico	182.2
Army	Fort McClellan, Alabama	152.7
Air Force	Kelly Air Force Base, Texas	131.1
Navy	Hunters Point Annex, California	127.7
Army	Savanna Army Depot Activity, Illinois	99.4
Army	Pueblo Chemical Depot, Colorado	88.0
Navy	Moffett Naval Air Station, California	78.6
Total		\$2,080.8

Source: DOD data.

Note: These figures were extracted from the *Defense Environmental Programs Fiscal Year 2005 Annual Report to Congress* and only include DERP-eligible cleanups, which generally represent the majority, but not all, cleanup costs. As previously noted, these estimates are not necessarily complete.

Opportunities Exist to Expedite Cleanup and Transfer of Unneeded BRAC Properties

Although opportunities exist to expedite the cleanup and transfer of unneeded BRAC 2005 properties, as well as untransferred properties from prior BRAC rounds, it is not clear to what extent each of these opportunities are considered for BRAC properties nor what successes or challenges were seen in their application since the services are not required to report their strategies for addressing unclean and untransferred properties to the Office of the Secretary of Defense (OSD).

Over the years, Congress has provided DOD with a wide range of property transfer authorities to expedite the cleanup and transfer of unneeded BRAC property, including public sales and the so-called “Early Transfer Authority,”³⁵ which allows property to be transferred before all necessary cleanup actions have been completed. In prior BRAC rounds, there was more extensive use made of some tools than others, and as we previously reported, DOD could have given greater attention to early transfer authority. Each of the military services has processes in place to monitor their progress to clean and transfer BRAC properties. Also, DOD’s March 2006 *Base Redevelopment and Realignment Manual*, which provides cleanup and disposal guidance for BRAC 2005 properties as well as untransferred properties from prior BRAC rounds, encourages the services to make wide use of all available property transfer tools. However, the services are not required to report to OSD on the status of monitoring their progress, their strategies for transferring BRAC properties, lessons learned, or whether they are taking advantage of all available property cleanup and transfer tools.

Many Property Disposal Alternatives Exist

Congress has, over time, provided DOD with a wide range of property transfer mechanisms and tools to expedite the cleanup and transfer of unneeded BRAC property, including public sales, early transfer authority, and privatization.³⁶ The closure and realignment of individual installations creates opportunities for those unneeded properties to be made available to others for reuse. When an installation becomes a BRAC action, the unneeded property is reported as excess. Federal property disposal laws require DOD to first screen excess property for possible reuse by defense and other federal agencies. If no federal agency needs the property, it is declared surplus and is made available to nonfederal parties, including state and local agencies, local redevelopment authorities, and the public, using various transfer tools as shown in table 5.

³⁵ Pub. L. No. 104-201, § 334.

³⁶ “Privatization” is when property is transferred in connection with a payment to the new owner for the cost to complete the environmental cleanup.

Table 5: Property Transfer Alternatives under the BRAC Process

Property transfer alternatives	Purpose of property transfer alternatives
Public benefit conveyance	Authorizes real and personal property transfers to state and local governments and certain nonprofit organizations for public purposes. Examples include schools, parks, airports, ports, public health facilities, historic monuments, and wildlife conservation.
Conservation conveyance	Authorizes a military department to convey surplus property that is suitable for conservation purposes to a state or local government, or to a nonprofit organization that exists primarily for the purpose of natural resource conservation.
Economic development conveyance	Authorizes a military department to convey real and personal BRAC property to a local redevelopment authority for the purposes of job generation on the installation.
Negotiated sale	Disposes of property by negotiated sale only under limited circumstances. Negotiated sales to public bodies can only be conducted if a public benefit, which would not be realized from competitive sale or authorized public benefit conveyance, will result from the negotiated sale. The grantee must pay no less than fair market value based upon highest and best use and an appraisal.
Public sale	Allows the military department, in consultation with the local redevelopment authority, to determine when public sale is the best method to dispose of a parcel. Public sale approaches include sealed bids, Internet auctions, and auction on the site to the highest bidder.
Reversion	Property for military installations was sometimes obtained from state and local governments at a reduced price or at no cost. In these cases, the deed or other instrument conveying the property to the military may contain reversionary rights or reverter clauses that provide for return of the property to its former owner once the military need has ended.
Special legislation	Congressional action through special legislation determining the terms and conditions for transferring BRAC properties.
Disposal to depository institutions	Conveys the property and improvements to a bank or credit union that conducted business on a closed installation and constructed or substantially renovated the facility with its funds. The military department must offer the land on which the facility is located to the financial institution before offering it to another entity; however, the depository institution must agree to pay fair market value.
Exchange for military construction	Provides an alternative authority for disposal of real property at a closing or realigning installation. This authority allows any real property at such an installation to be exchanged for military construction at that or another location.

Source: DOD.

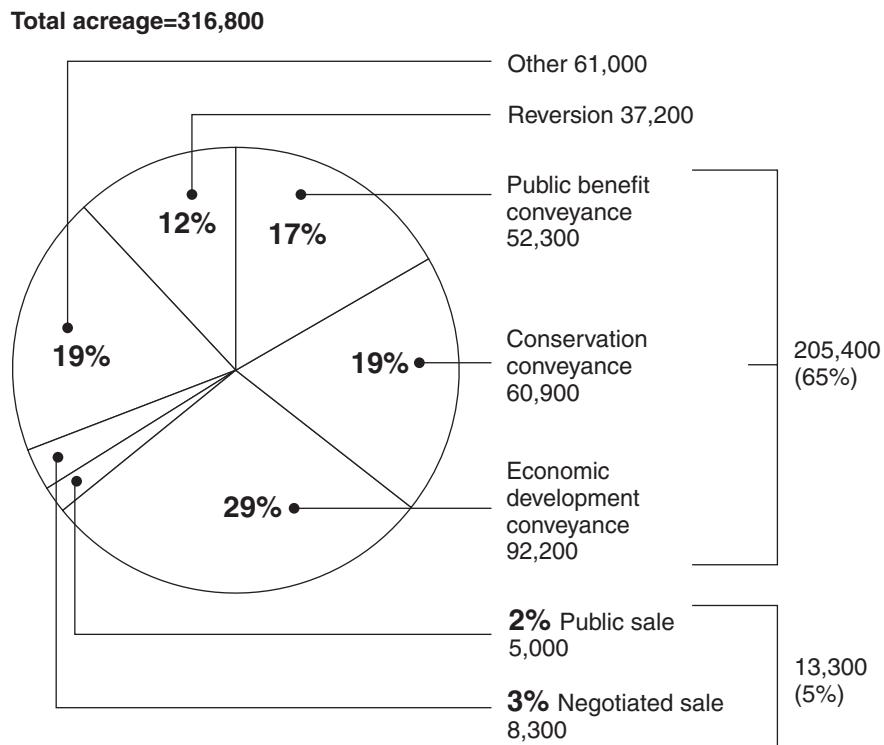
Use of the Wide Range of Tools Has Been Limited in the Past, but Has Greater Emphasis Now

Although prior DOD guidance to the military services promoted creativity within applicable laws and regulations to successfully close and reuse installations, DOD used some property transfer tools to a much greater extent than others. In some cases, DOD's deference to community plans for economic development led it to use low or no-cost transfer tools more often than property sales. As BRAC has evolved, there have been differing emphases placed on the approaches used to transfer unneeded property. For example, following the 1988 round, DOD emphasized revenue generation through the sale of unneeded properties. Following the BRAC rounds in the 1990s, however, DOD underscored economic development

through direct, no-cost transfers of property to the public sector. The emphasis during the 2005 BRAC round appears to be headed towards a renewed importance on achieving fair market value through various transfer authorities and the consideration of all transfer tools available to quickly transfer unneeded property to others for reuse.

The services have taken some steps to expand their use of the wide array of transfer tools in recent years, most notably the Navy, which realized over \$850 million in revenues from the sale of unneeded BRAC properties at two former Marine Corps air stations in California. Figure 3 illustrates the alternatives used to transfer unneeded BRAC property from the prior BRAC rounds to nonfederal entities as of September 30, 2006.

Figure 3: Alternatives Used to Transfer Unneeded BRAC Acreage to Nonfederal Entities in Prior BRAC Rounds, as of September 30, 2006



Source: GAO analysis of DOD data.

Notes: Acreage is rounded to the nearest 100 acres and individual entries do not total due to rounding. The “other” category refers to various other transfers mechanisms, including special legislation, transfer for use by depository institutions, and exchanges for military construction. See table 5 for details on property transfer alternatives.

As shown in figure 3, low- and no-cost property conveyance mechanisms accounted for 65 percent (205,400) of all acres transferred—public benefit,

conservation, and economic development conveyances were used in 17 percent, 19 percent, and 29 percent, respectively—whereas public and negotiated sales accounted for 5 percent (13,300) of all acres transferred. According to DOD officials, this trend reflected deference to local community organizations and their preference for low- and no-cost conveyances. Moreover, it also reflected the difficulty in using public and negotiated sales at that time, because more time was often needed to determine the nature and extent of environmental contamination and its potential cleanup cost, to attract private property developers. However, as more information is developed at these sites and as local economic conditions change, a different approach to transferring property may now be successful, an approach which would not have worked in the past. For example, while an agreement was reached in 2000 on a no-cost economic development conveyance at the former Alameda Naval Air Station, California, the local redevelopment authority could not follow through on the terms of this conveyance to create jobs because of a decline in the local economy. Therefore, both the local redevelopment authority and the Navy were reassessing other property transfer options, including public sales, at the time of our review.

Use of Early Transfer Authority May Facilitate Property Transfers

Another tool for facilitating property transfers is the so-called “early transfer authority,” which is not actually a property transfer mechanism but rather an amendment to SARA, allowing the services to transfer property that has not been entirely cleaned under an authorized transfer conveyance. Recognizing that environmental cleanup has often delayed the transfer of BRAC property, Congress enacted the early transfer authority provision³⁷ in 1996 which allows, under certain conditions, property to be transferred before all necessary cleanup actions have been completed. The transfer agreement identifies who will complete the cleanup and what funding the service will provide, if any. In addition, the entity assuming cleanup responsibilities will often purchase environmental insurance to insure itself against possible cost overruns. We previously reported that this tool should receive greater DOD attention³⁸ and DOD has increased its use of this authority, transferring a total of about 23,700 acres using this method as of July 2006.

³⁷Pub. L. No. 104-201, § 334.

³⁸GAO, *Military Base Closures: Progress in Completing Actions from Prior Realignments and Closures*, GAO-02-433 (Washington, D.C.: Apr. 5, 2002).

There are typically two scenarios with which an early transfer is requested. In the first scenario, the deed to the property is provided to the new owner, such as a local redevelopment authority, and DOD continues the cleanup. For the other scenario, the user takes the deed to the property and as the new owner agrees to complete cleanup activities or to control the implementation of an ongoing cleanup at the time of transfer. Although this tool is officially called the “Transfer Authority in Connection with Payment of Environmental Remediation Costs,” it is commonly referred to as “privatization.” DOD’s March 2006 *Base Redevelopment and Realignment Manual*³⁹ states that if the fair market value of the property is more than the cleanup cost, the purchaser must pay the military departments the difference. However, if fair market value is less than the cleanup costs, the military department may pay the purchaser the difference. Because the purchaser will be responsible for completing the cleanup, the services must confirm that the purchaser has the technical expertise and financial capability to do so before considering this approach. In terms of cost, DOD retains responsibility for funding the environmental cleanup, regardless of whether it is performed by DOD or the user.

A primary advantage of using the early transfer authority is that it makes property available to the future user as soon as possible, thus allowing environmental cleanup and redevelopment activities to proceed concurrently. This can save time and costs and provide users with greater control over both activities. Furthermore, it provides communities with the means to quickly put property into productive use, create jobs, and possibly create tax revenue. DOD reported that some reasons why the services were not taking full advantage of this authority were due to a lack of information on early transfer authority by communities, how to use it, and how the process ensures the protection of public health, safety, and the environment. In addition, DOD cites a lack of support from state and local regulators as a reason for the previously limited use of this authority. However, a local redevelopment authority can purchase environmental insurance to transfer the risk of potential cost overruns from the property owner to the contractor and the insurance provider. By shifting the risk, contractors may be strongly motivated to complete the environmental cleanups in a timely and cost-efficient manner. According to one local redevelopment authority official, privatization of environmental cleanup (one scenario for achieving an early transfer) is now seen as a way to expedite the cleanup and transfer process significantly because DOD’s

³⁹DOD, *Base Redevelopment and Realignment Manual*, 4165.66-M, March 1, 2006.

approach can be too methodical, while the private sector can remediate the hazards more economically and in less time.

As of July 2006, the number of completed early property transfers had increased from 12 (about 8,200 acres) as of September 30, 2001, to 23 (about 23,700 acres). According to DOD officials, 8 early transfer authority actions are currently pending (in the process of being transferred), and 5 are currently being considered for the future. Table 6 provides a list of locations where early transfer authority has been completed, i.e., where a deeded transfer has been completed, as of July 2006.

Table 6: Use of Early Transfer Authority at Prior BRAC Round Bases, as of July 2006

Installation	Acres
Fort McClellan, Alabama	4,692
Naval Shipyard, Mare Island, California	3,486
Fort Devens, Massachusetts	2,358
Alabama Ammunition Plant, Alabama	2,235
Naval Air Station Memphis, Tennessee	1,863
Naval Air Station Agana, Guam	1,798
Tooele Army Depot, Utah	1,621
Naval Activities, Guam	1,482
Fort Ord, California	1,401
Fleet Industrial Supply Center, Oakland, California	676
Naval Shipyard, Charleston, South Carolina	436
Oakland Army Base, California	364
Grissom Air Force Base, Indiana	201
Bayonne Military Ocean Terminal, New Jersey	192
Griffiss Air Force Base, New York	179
Mather Air Force Base, California	165
Wurtsmith Air Force Base, Michigan	149
Naval Ordnance Station, Louisville, Kentucky	142
Fitzsimons Army Medical Center, Colorado	133
Naval Training Center, San Diego, California	51
Public Works Center, Guam	25
Lowry Air Force Base, Colorado	12
Naval Training Center, Orlando, Florida	9
Total acres	23,670

Source: DOD.

Services Monitor Progress, but DOD Does Not Require Them to Report Property Transfer Strategies and Progress

Although each of the military services has processes and procedures in place to monitor environmental cleanup and property transfer progress, DOD has not required the services to prepare and provide a BRAC property cleanup and transfer strategy to OSD, which has overall responsibility for overseeing the services' implementation of environmental cleanup on unneeded BRAC properties. Without such a requirement, OSD cannot readily monitor and track the transfer tools the services are using to expedite the cleanup and transfer of BRAC properties. Further, there is less likelihood of the sharing of lessons learned among the services, and communities could be denied full economic benefits that may be possible through expedited reuse of the property.

In March 2006 guidance, DOD encouraged the military services to use all appropriate means to transfer unneeded property from the BRAC 2005 round and prior BRAC rounds, and to dispose of property at the "highest and best use".⁴⁰ As the disposing agency, the military department has the authority to select the methods of disposing of unneeded properties. The guidance states that DOD recognizes that federal law provides it with an array of legal authorities by which to transfer property, but also recognizes that the variety of installation types and the unique circumstances of the surrounding communities do not lend themselves to a single approach.

We found that each of the services monitors BRAC property cleanup and disposal progress as part of their responsibility to dispose of unneeded BRAC property. According to the Army, discussions within the Army Conveyance Team⁴¹ can focus on progress and problems being encountered with a current property disposal method at an installation. The Army then attempts to resolve the problem with the local redevelopment authority. In addition, the Army has developed a system to track ongoing transfer conveyances for BRAC properties so it can identify slippage and track progress. Approximately every 6 months Army environmental personnel meet to discuss funding requirements and property transfer issues. Within the Air Force Real Property Agency, environmental program reviews are performed at least twice a year to

⁴⁰The most likely use to which a property can be put, which will produce the highest monetary return, promote its maximum value, or serve a public or institutional purpose.

⁴¹The Army Conveyance Team consists of the BRAC Program Manager; Base Transition Coordinator; Base Environmental Coordinator; representatives from the installation, Army Environmental Law Division, Corps of Engineers and Army Office of General Counsel; and other Army personnel as necessary.

determine the extent of cleanup progress at Air Force BRAC installations. In addition, the Air Force conducts bimonthly reviews to identify potential problems and to confirm that the transfer schedule is being maintained. We were told by a Navy official that each Program Management Office regional director⁴² meets monthly with each of their BRAC teams to discuss cleanup and property disposal progress at BRAC properties and, if needed, any potential alternative approaches that could expedite cleanup and disposal.

According to a key OSD official responsible for monitoring the services' progress, the military services are not required to formally report their strategy for cleaning up and transferring BRAC properties, including sharing any challenges and successes they experienced in the use of various property disposal tools or that they fully considered using all the tools available to them. According to OSD and service officials in charge of monitoring the services' progress in the cleanup and transfer of unneeded properties, the services currently provide OSD with only informal, ad hoc progress reports. Furthermore, these officials believe that a more regular and formal process for periodically reporting and sharing experiences with various transfer tools would be helpful to both OSD (in tracking the use of these tools) and to the services (in learning from others' successes and failures). One service official went on to state that more is actually learned by the failures rather than the successes and those experiences should be shared. We believe that sharing information, possibly via the Internet, among and between the services, communities, and the private sector, could facilitate the exchange of ideas and the sharing of lessons learned which may in turn expedite the cleanup and transfer of BRAC properties. Without such a requirement, OSD is hampered in tracking the services' use of these tools to assure Congress that they are taking full advantage of all opportunities to expedite the cleanup and transfer of unneeded properties so that communities can realize the full economic benefits of expeditious property reuse.

Conclusions

An incomplete picture of environmental cleanup costs at the beginning of the implementation of BRAC 2005 relates to a piecemeal reporting of environmental cleanup costs for bases when they are in an active status, coupled with the fact that environmental cleanup information evolves over time. DOD can ensure that Congress has the most complete information

⁴²The Navy Program Management Office (PMO) regions are: PMO West (San Diego, Calif.); PMO Southeast (Charleston, S.C.); and PMO Northeast (Philadelphia, Pa.).

available by providing more clarification and explanation as to what is included and excluded in the environmental cleanup costs it presents to Congress and include the total expected cost—both incurred costs as well as the most current estimate of expected future costs—for the cleanup at BRAC bases. Without this information, Congress cannot ensure that scarce federal resources are used in the most efficient manner to address environmental cleanup issues at unneeded DOD properties so that productive new uses for these properties can be more quickly realized.

Numerous tools have been made available to DOD to help expedite the transfer of unneeded BRAC property to other users. As DOD seeks to use these tools for 2005 BRAC round bases, OSD could more effectively conduct its oversight responsibilities by requiring the services to periodically report on their progress to transfer properties and plans to take full advantage of the tools available to them. In addition, each of the services may find it useful to learn and benefit from the property transfer experiences gained with these tools within and among the services. Delays in transferring unneeded properties result in additional expense to DOD to care for and maintain these properties while the affected community receives no benefit—economic or otherwise—as it waits for the property to be redeveloped for productive use.

Recommendations for Executive Action

In order to provide more complete and transparent cost information for the environmental cleanup of properties from all BRAC rounds, we recommend that the Secretary of Defense direct the Under Secretary of Defense (Acquisition, Technology, and Logistics) to report all costs (DERP and non-DERP)—past and future—required to complete environmental cleanup at each BRAC installation and to fully explain the scope and limitations of all the environmental cleanup costs DOD reports to Congress. We suggest including this information in the annual BRAC budget justification documentation since it would accompany information Congress considers when making resource allocation decisions.

In order to help ensure that the military services are taking full advantage of all tools available to clean up and transfer unneeded BRAC properties from the 2005 round, we recommend that the Secretary of Defense direct the Under Secretary of Defense (Acquisition, Technology, and Logistics) to require that the military services periodically report to OSD on the status and proposed strategy for transferring these properties and include an assessment of the usefulness of all tools at their disposal. We suggest placing this information in an easily shared location, such as a Web site, so

that each service, and even the local communities and private sector, can share and benefit from lessons learned.

Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD concurred with the fundamental aspects of both of our recommendations to take actions to improve its reporting of BRAC environmental cleanup costs to Congress and to require the military services to periodically report to the Office of the Secretary of Defense on the status and proposed strategy for transferring unneeded BRAC properties. DOD's comments are reprinted in appendix IV and addressed as appropriate in the body of the report. DOD further provided technical comments, which we also incorporated as appropriate into this report.

In order to provide more complete and transparent cost information on the entire cost of environmental cleanup, DOD concurred with our basic recommendation to report all costs—past and future—required to complete environmental cleanup at each BRAC installation and to fully explain the scope and limitations of all the environmental cleanup costs DOD reports to Congress. However, DOD's comments reflect only a partial concurrence because DOD did not agree with our suggestion to include this information in the annual BRAC budget justification documentation. DOD stated its belief that this would be counterproductive and that Congress has prescribed the types of environmental information it wants presented in the budget documentation, which DOD complies with. In making our suggestion, it was not our intent that it be considered as part of the recommendation. However, we continue to believe that the annual BRAC budget justification documentation would be the most useful place for this cost-reporting information, since this documentation is referred to by Congress when deliberating BRAC environmental cleanup funding. Nonetheless, if the Department can meet the intent of our recommendation by submitting this information in another report, we defer to the Department on how best to report this information to Congress.

In order to help ensure that the military services are taking full advantage of all tools available to clean up and transfer unneeded BRAC properties from the 2005 round, DOD concurred with our recommendation to require the military services to periodically report to the Office of the Secretary of Defense on the status and proposed strategy for transferring BRAC properties and include an assessment of the usefulness of all tools at their disposal. Although DOD did not comment on our suggestion to accomplish this through a shared Web site in order to maximize the lessons learned,

DOD officials embraced the idea as something easily doable in comments made during our exit interview with the agency.

We are sending copies of this report to interested congressional committees; the Secretaries of Defense, the Army, Navy, and Air Force; and the Director, Office of Management and Budget. We will also make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site on <http://www.gao.gov>.

Please contact me on (202) 512-4523, leporeb@gao.gov, or my Assistant Director, Jim Reifsnyder, at (202) 512-4166, reifsnyderj@gao.gov, if you or your staff has any questions concerning this report. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff that made major contributions to this report are listed in appendix VI.

A handwritten signature in black ink, appearing to read "Brian Lepore".

Brian Lepore, Acting Director
Defense Capabilities and Management

List of Congressional Committees

The Honorable Carl Levin
Chairman
The Honorable John McCain
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Daniel K. Inouye
Chairman
The Honorable Ted Stevens
Ranking Minority Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Tim Johnson
Chairman
The Honorable Kay Bailey Hutchinson
Ranking Minority Member
Subcommittee on Military Construction,
Veterans Administration, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Ike Skelton
Chairman
The Honorable Duncan Hunter
Ranking Minority Member
Committee on Armed Services
House of Representatives

The Honorable John P. Murtha
Chairman
The Honorable C.W. Bill Young
Ranking Minority Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

The Honorable Chet Edwards
Chairman
The Honorable Roger F. Wicker
Ranking Minority Member
Subcommittee on Military Construction,
Veterans Affairs and Related Agencies
Committee on Appropriations
House of Representatives

Appendix I: Scope and Methodology

To address our first objective to examine potential cleanup costs associated with the Base Realignment and Closure (BRAC) process, we collected and analyzed relevant documentation generated by the Office of the Secretary of Defense and the military departments, and we interviewed key officials with knowledge of BRAC cost reports and estimates. We collected and analyzed environmental cleanup cost estimates for the 25 major base closures and similar estimates for the minor closures and realignments for the 2005 BRAC round, as well as costs for the prior BRAC rounds. To gain a sense of the models used to estimate cleanup costs, we viewed a demonstration of the Remedial Action Cost Engineering Requirements System cost estimating tool used by the Army and the Air Force, and the Normalized Data cost estimating tool used by the Navy. We interviewed knowledgeable officials about BRAC environmental cleanup costs from the Army Environmental Center, the Air Force Real Property Agency, and the Navy's Northeast BRAC Program Management Office. In addition, we visited four BRAC 2005 locations—Fort Monroe, Hampton, Virginia; Umatilla Chemical Depot, Hermiston, Oregon; Brunswick Naval Air Station, Brunswick, Maine; and the Mississippi Army Ammunition Plant, Picayune, Mississippi—to gain a better understanding of the environmental cleanup requirements facing these installations and the processes that base officials are following to estimate cleanup costs. We also interviewed Office of the Secretary of Defense and the services' officials to gain an understanding of how the estimates derived from the services' environmental cost estimating models are reported in various Department of Defense (DOD) environmental reports to Congress. In so doing, we analyzed the cost information contained in each report in order to derive estimated cleanup costs for the prior BRAC rounds. We also compared the cost estimates projected at the installation level with estimates that were reported to Congress to verify that the data were consistent. Although we found some discrepancies, we concluded that, overall, the DOD data were sufficiently reliable for the purposes of this report.

To address our second objective to examine DOD's progress in transferring unneeded properties from the four prior BRAC rounds, we reviewed our prior BRAC reports and reports prepared by the Congressional Research Service and DOD on this subject. Using property transfer information on the four prior BRAC rounds provided by the Office of the Secretary of Defense and the services, we updated the transfer acreage data reported in our January 2005 report in order to determine the extent of progress made in the transfer of unneeded property. We assessed the reliability of the reported transferred property acreage by interviewing knowledgeable officials and comparing acreage totals to GAO reports

from prior years. Although the acreage totals change as property is transferred and more accurate land surveys are completed, we determined that the data were sufficiently reliable to provide overall comparisons. We interviewed officials from the Environmental Protection Agency's Office of Federal Facilities and consulted with them about their concerns regarding environmental cleanup at prior BRAC round bases. We interviewed DOD and military service officials responsible for environmental cleanup at BRAC and active bases at both the headquarters and field level to clarify reasons for property transfer delays, such as technology and regulations. We visited the three BRAC bases from the four prior BRAC rounds with the most expensive estimated cost to complete for cleanups—the former McClellan Air Force Base, Sacramento, California; the former Fort Ord, Marina, California; and the former Alameda Naval Air Station, Alameda, California. During these visits, we spoke not only with military officials but also with officials from local redevelopment authorities at these installations, as well as officials from the California State Environmental Protection Agency, to determine the major impediments to property transfers. To supplement these discussions we collected data from the services on the extent that environmental issues were impeding property transfer.

To address our third objective to assess possible opportunities for DOD to expedite the cleanup and transfer of unneeded BRAC properties, we reviewed relevant laws, regulations, and policies governing the cleanup and transfer of properties, and we also reviewed prior GAO and DOD reports on this subject. We also reviewed DOD's 2006 *Base Redevelopment and Realignment Manual* for an assessment of tools available to the services for expediting the cleanup and property transfer. We analyzed the use of these tools to date at selected BRAC installations and compiled overall statistics on the use of these authorities in the prior BRAC rounds. We interviewed officials representing federal and state environmental regulatory agencies for their perspective on DOD cleanup activities and any opportunities for DOD to expedite the cleanup process while adhering to legal cleanup standards. In addition, during our visits to the seven installations mentioned earlier, we interviewed community officials for their perspective on the speed and quality of environmental cleanups and property transfers, and opportunities for speeding up the process. We spoke with cognizant from the Office of the Secretary of Defense (OSD) and service officials to ascertain their views as to the extent of oversight of the services' use of existing transfer tools and the sharing of lessons learned from the property transfer process.

During the course of our review, we contacted the following offices with responsibility for oversight, management, and implementation of the environmental cleanup of military and specifically, BRAC bases:

Office of the Secretary of Defense

- Office of the Deputy Under Secretary of Defense for Acquisition, Technology and Logistics, Installations and Environment, Washington, D.C.
- Office of the Secretary of Defense (Comptroller), Washington, D.C.

Army

- Army Office of the Assistant Chief of Staff of Installation Management, Base Realignment and Closure Division, Arlington, Virginia
- Office of the Deputy Assistant Secretary of the Army, Environmental Safety and Occupational Health, Washington, D.C.
- Army Installation Management Agency, Arlington, Virginia
- Army Materiel Command, Fort Belvoir, Virginia
- Army Environmental Center, Aberdeen, Maryland
- Army Corps of Engineers, Environmental Office for Formerly Used Defense Sites, Washington, D.C.
- Army National Guard, Arlington, Virginia

Navy

- Navy BRAC Program Management Office Northeast, Philadelphia, Pennsylvania
- Navy BRAC Program Management Office, West, San Diego, California
- Navy BRAC Environmental Office, Arlington, Virginia

Air Force

- Air Force Real Property Agency, Arlington, Virginia
- Air Force Audit Agency, Washington, D.C.
- Air National Guard, Arlington, Virginia
- Air Force Office of the Civil Engineer, Environmental Division, Arlington, Virginia

Other agencies

- Federal Environmental Protection Agency, Federal Facilities Branch, Arlington, Virginia
- Association of State and Territorial Solid Waste Management Officials, Washington, D.C.
- State of California Environmental Protection Agency, Sacramento, California
- Fort Ord Reuse Authority, Marina, California
- McClellan Local Reuse Authority, Sacramento, California
- Alameda Reuse and Redevelopment Authority, Alameda, California
- Umatilla Reuse Authority, Hermiston, Oregon
- Brunswick Local Redevelopment Authority, Brunswick, Maine
- Fort Monroe Reuse Authority, Hampton, Virginia

We visited three bases closed during the prior BRAC rounds—chosen because they represent each of the three services and also have the three most expensive estimated costs to complete cleanups for sites currently undergoing cleanup:

- Fort Ord, Marina, California
- McClellan Air Force Base, Sacramento, California
- Alameda Naval Air Station, Alameda, California

We also visited four bases scheduled for closure under the 2005 BRAC round—chosen to represent a variety of missions as well as geographic diversity:

- Fort Monroe, Hampton, Virginia
- Umatilla Chemical Depot, Hermiston, Oregon
- Brunswick Naval Air Station, Brunswick, Maine
- Mississippi Army Ammunition Plant, Picayune, Mississippi

We conducted our work from January 2006 through November 2006 in accordance with generally accepted government auditing standards.

Appendix II: CERCLA Cleanup Requirements

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA),¹ as amended, authorizes cleanup actions at federal facilities where there is a release of hazardous substances or threat of such a release. CERCLA section 120(h) contains provisions that establish requirements for the transfer or lease of federally owned property based on storage, disposal, or known release of hazardous substances. All contracts for transfer or lease must include notice of this storage, disposal, or release. Except as noted below, CERCLA section 120(h)(3) requires that transfers of federal real property by deed must also include: (a) a covenant by the United States that all remedial action necessary to protect human health and the environment has been taken prior to transfer, (b) a covenant by the United States to undertake any further remedial action found to be necessary after transfer, and (c) a clause granting access to the transferred property in case remedial action or corrective action is found to be necessary after transfer.

To clean up potentially contaminated sites on both active and closed bases, the Department of Defense (DOD) generally follows the process that is required under CERCLA, which generally includes the following phases and activities:

- Preliminary Assessment—Available information is collected regarding contamination, including a search of historical records, to confirm whether a potential environmental contamination or military munitions hazard could be present and to determine whether further action is needed.
- Site Investigation—This step usually involves a walk around the site by an environmental engineer and may involve some limited soil and water sampling including an analysis to determine the extent and source(s) of the hazards.
- Remedial Investigation/Feasibility Study—More rigorous statistical sampling and analysis is conducted to determine the exact nature and extent of contamination and whether cleanup action is needed and, if so, select alternative cleanup approaches. This could include removal, limiting public contact, determining no further action is warranted, or cleaning of the hazardous media (soil, air, or water) on site.
- Remedial Design/Remedial Action—This phase involves designing and constructing the actual cleanup remedy, such as a pump and treat system for underground water, or the removal of munitions.

¹ Pub. L. No. 99-499 (1986).

-
- Long-term Monitoring—At this phase, parties responsible for the cleanup periodically review the remedy in place to ensure its continued effectiveness, including checking for unexploded ordnance and conducting public education.

While the Superfund Amendments and Reauthorization Act of 1986 had originally required the government to warrant that all necessary cleanup action had been taken before transferring property to nonfederal ownership, the act was amended in 1996 to expedite transfers of contaminated property.² Now such property, under some circumstances, can be transferred to nonfederal users before all remedial action has been taken. However, certain conditions must exist before the department can exercise this “early transfer authority.” For example, the property must be suitable for transfer for the intended use; transfer of the property must not delay any cleanup actions; and the governor of the state where the property is located must approve the transfer. The advantage of an early transfer is that property is made available under a transfer authority to the future user as soon as possible to allow for concurrent environmental cleanup and redevelopment. The law still requires that contaminated sites must be cleaned up to ensure that past environmental hazards due to former DOD activity on transferred BRAC property are not harmful to human health or to the environment and that the property can support new use; however, the early transfer authority does allow for the concurrent cleanup and reuse of the property.

² Pub. L. No. 104-201, § 334.

Appendix III: Environmental Cleanup Cost Information in Four Selected Reports to Congress

The Department of Defense (DOD) annually provides Congress with four required reports that include information on environmental cleanup costs and estimates at active and Base Realignment and Closure (BRAC) installations. Each report is prepared for a different purpose, such as budgetary, financial, or program oversight, resulting in various presentations of estimated and actual cleanup costs. None of the reports, however, provides the total environmental program costs and estimates for each service and their bases. The types of environmental program costs include restoration and munitions cleanup, compliance, and program management and planning.

The four annual reports are¹ the (1) Annual BRAC Budget Appropriations Request, (2) Annual Defense Environmental Programs Report to Congress, (3) Annual Government's Consolidated Financial Statement Report, and (4) Annual Section 2907 report.² The following provides a description of the reports' mandates, when they are issued, and the information they contain.

Annual BRAC Budget Appropriations Request: Section 206 of the Defense Authorization Amendments and Base Closure and Realignment Act, Public Law 100-526, specifies the type of information required in DOD's annual budget appropriation request for BRAC funding. DOD and the services prepare separate budget justification books that provide details for each BRAC round on funds made available for environmental cleanup and the budget request estimate for the fiscal year that the request is being made for. The environmental funded amounts and the estimate include information on all environmental costs, including restoration and munitions cleanup, compliance, and program management and planning.

The information in DOD's fiscal year 2006 budget request indicates that \$9.0 billion had been made available for DERP (environmental restoration and munitions) cleanup and non-DERP (compliance and program management and planning) through fiscal year 2005 for the prior four BRAC rounds. The fiscal year 2006 budget request estimate for the

¹ The report titles listed are the titles commonly used. The official titles of these reports are, *DOD Base Realignment and Closure Executive Summary and Budget Justification*, *Department of Defense Performance and Accountability Report*, *The Defense Environmental Programs Annual Report to Congress*, and the *Department of Defense Report on 2005 Defense Base Closure and Realignment Implementation*, respectively.

² This reporting requirement refers to Section 2907 of Public Law 101-510.

environmental cleanup costs was about \$378 million. DOD also presented Congress with information on the 2005 BRAC closures and realignments, which shows that DOD and the services plan to spend about \$426 million on the environmental cleanup cost categories between fiscal year 2006 and 2011. The estimated amounts were presented in current or inflated dollars.

Although the Annual BRAC Budget Appropriations Request report includes all categories of costs, it does not include—nor is DOD required to report—the total estimated cost to complete the environmental cleanup (past and future costs) for the BRAC bases.

Annual Government's Consolidated Financial Statement Report: As required by the Chief Financial Officer Act of 1990 and the Government Management Reform Act of 1994, DOD is required to report on its estimated environmental liabilities in the federal government's annual fiscal year consolidated financial statements, and does so each year in its performance and accountability report to Congress. The environmental liability information for active and BRAC bases is contained in note 14 of the financial statements for fiscal year 2005 and the information contains separate line item amounts for the restoration and compliance categories. The environmental program management and planning cost amounts were included in the restoration amount and DOD uses the installations' defense environmental programs data to compile a large portion of its environmental liabilities for financial statement reporting.

The November 15, 2005, report for fiscal year 2005 activity indicates that the total BRAC restoration liability amount, or future cost to complete, was \$3.5 billion. The BRAC environmental liability for compliance and program management and planning was reported as \$206.5 million. The data are not inflated and are stated in current dollars.

The government's annual consolidated financial statement report presents the most complete information on the environmental cost categories for the cost to compete the cleanup. The information is reported in total for DOD and summarized for each service. However, the report does not provide information on how much has been made available for BRAC environmental cleanup, and there is no detailed information presented for individual bases.

Annual Defense Environmental Programs Report to Congress: As required by section 2706 of Title 10, DOD annually submits this report to Congress. The latest report, which covered fiscal year 2005, was issued to Congress in March 2006. Different sections of the report discuss and

provide planning and funding costs and cost estimate information for the various DOD environmental programs at active and BRAC bases. These sections have information on active and BRAC bases' restoration and munitions cleanup expenditures for fiscal years 2004 and 2005 and the cost to complete the environmental cleanup from 2006 to completion. The report also presents information on non- DERP and program management and planning costs and estimates for BRAC activities in the aggregate (but not by base).

The information on the expected cost to complete the restoration and munitions environmental cleanup at BRAC bases for the first four rounds shows that DOD estimates this cost at about \$3.8 billion from 2006 to completion. From the section of the report that reconciles the services' cost to complete with the reported environmental liability, we were able to sum the services' compliance and management and support costs and determine that the total cost to complete from fiscal year 2006 for these categories totaled about \$0.4 billion. The dollar amounts for cost to complete from 2006 through 2011 were inflated and the dollar amounts from fiscal year 2012 to completion were in constant 2011 dollars.

While the defense environmental programs report provides ample information on environmental cleanup costs and estimates, it does not consolidate the information to obtain an overall or total environmental cleanup cost amount for each service and base.

Annual Section 2907 Report: This report addresses reporting requirements specified in section 2907 of Public Law 101-510, commonly referred to as the BRAC Act, for all BRAC 2005 installations. Among other things, the 2907 report includes details on the known environmental remediation restoration and munitions cleanup issues at each base affected by the 2005 BRAC recommendation. The information provides details on the estimate to complete the cleanup at each identified site, and plans and time lines to address the cleanup. According to DOD officials, the first report issued for the 2005 BRAC was in March 2006 and the estimates are based on the restoration and munitions cleanup data contained in the defense environmental programs report.

Appendix IV: Comments from the Department of Defense



OFFICE OF THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION
TECHNOLOGY
AND LOGISTICS

JAN 30 2007

Mr. Brian J. Lepore
Acting Director, Defense Capabilities
and Management
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Lepore:

This is the Department of Defense (DoD) response to the GAO draft report, "MILITARY BASE CLOSURES: Opportunities Exist to Improve Environmental Cleanup Cost Reporting and to Expedite Transfer of Unneeded Property," dated November 17, 2006, (GAO Code 350792/GAO-07-166).

The Department partially concurs with the GAO recommendation to report all costs—past and future—required to complete environmental cleanup at each Base Realignment and Closure (BRAC) installation and to fully explain the scope and limitations of all the environmental cleanup costs DoD reports to Congress. While DoD concurs with the basic recommendation as stated above, DoD nonconcurs with the GAO suggestion to include this information in the annual BRAC budget justification documentation.

The Department concurs with the GAO recommendation to require the military services to periodically report to the Office of the Secretary of Defense (OSD) on the status and proposed strategy for transferring BRAC properties and include an assessment of the usefulness of all tools at their disposal.

The Department's comments on the recommendations and additional technical comments are enclosed. Thank you for the opportunity to comment on the Draft Report.

Sincerely,

Philip W. Grone
Deputy Under Secretary of Defense
(Installations and Environment)

Enclosures:
as stated



**GAO DRAFT REPORT – DATED NOVEMBER 17, 2006
GAO CODE 350792/GAO-07-166**

**“MILITARY BASE CLOSURES: Opportunities Exist to Improve
Environmental Cleanup Cost Reporting and to Expedite Transfer of Unneeded
Property”**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE RECOMMENDATIONS**

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Deputy Under Secretary of Defense for Installations and Environment to report all costs (Defense Environmental Restoration Program (DERP) and non-DERP) – past and future – required to complete environmental cleanup at each Base Realignment and Closure (BRAC) installation and to fully explain the scope and limitations of all the environmental cleanup costs DoD reports to Congress. The GAO also suggested DoD include this information in the annual BRAC budget justification documentation since it would accompany information Congress considers when making resource allocation decisions. (page 40/GAO Draft Report)

DoD RESPONSE: The Department partially concurs with the recommendation in the draft report. The Department concurs with the GAO recommendation to report all costs—past and future—required to complete environmental cleanup at each Base Realignment and Closure (BRAC) installation and to fully explain the scope and limitations of all the environmental cleanup costs DoD reports to Congress. The Department does not concur with the GAO suggestion to include this information in the annual BRAC budget justification documentation. The Department believes that including such information in the annual BRAC budget submission would be counterproductive. The annual BRAC budget documentation is the vehicle for justifying resources to implement BRAC actions for the fiscal year that the request is being made. Congress has prescribed the type of environmental information it wants presented in the budget documentation and the Department is in full compliance with that congressional direction. The Department will determine the best vehicle for reporting all BRAC costs – past and future – required to complete environmental cleanup at each BRAC installation.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Deputy Under Secretary of Defense for Installations and Environment to require that the Military Services periodically report to the Office of the Secretary of Defense on the status and proposed strategy for transferring BRAC properties and to include an assessment of the usefulness of all the tools at their disposal. The GAO also suggested DoD place this information in an easily shared location, such as a

**Appendix IV: Comments from the Department
of Defense**

Website, so that each Service, and even the local communities and private sector, can share and benefit from lessons learned. (Page 40/GAO Draft Report)

DoD RESPONSE: The Department concurs with the recommendation in the draft report.

Appendix V: Key Prior GAO Reports on DOD Environmental Cleanup

Environmental Liabilities: Long-Term Planning Hampered by Control Weaknesses and Uncertainties in the Federal Government's Estimates. [GAO-06-427](#). Washington, D.C.: March 31, 2006.

Military Bases: Analysis of DOD's 2005 Selection Process and Recommendations for Base Closures and Realignments. [GAO-05-785](#). Washington, D.C.: July 1, 2005.

Military Base Closures: Observations on Prior and Current BRAC Rounds. [GAO-05-614](#). Washington, D.C.: May 3, 2005.

Military Base Closures: Updated Status of Prior Base Realignments and Closures. [GAO-05-138](#). Washington, D.C.: January 13, 2005.

DOD Operational Ranges: More Reliable Cleanup Cost Estimates and a Proactive Approach to Identifying Contamination Are Needed. [GAO-04-601](#). Washington, D.C.: May 28, 2004.

Military Munitions: DOD Needs to Develop a Comprehensive Approach for Cleaning Up Contaminated Sites. [GAO-04-147](#). Washington, D.C.: December 19, 2003.

Environmental Compliance: Better DOD Guidance Needed to Ensure That the Most Important Activities Are Funded. [GAO-03-639](#). Washington, D.C.: June 17, 2003.

Environmental Contamination: DOD Has Taken Steps to Improve Cleanup Coordination at Former Defense Sites but Clearer Guidance Is Needed to Ensure Consistency. [GAO-03-146](#). Washington, D.C.: March 28, 2003.

Military Base Closures: Progress Completing Actions from Prior Realignment and Closures. [GAO-02-433](#). Washington, D.C.: April 5, 2002.

Military Bases: Status of Prior Base Realignment and Closure Rounds. [GAO/NSIAD-99-36](#). Washington, D.C.: December 11, 1998.

Military Base Closures: Reducing High Costs of Environmental Cleanup Requires Difficult Choices. [GAO/NSIAD-96-172](#). Washington, D.C.: September 5, 1996.

Appendix VI: GAO Contacts and Staff Acknowledgments

GAO Contacts

Brian Lepore, Acting Director (202) 512-4523
Jim Reifsnyder, Assistant Director (202) 512-4166

Acknowledgments

In addition to the individuals named above, Barry Holman, Karen Kemper, Andy Marek, Bob Poetta, and Angie Zeidan made significant contributions to this report.

Other individuals also contributing to this report include Susan Ditto, Ron La Due Lake, Steve Lipscomb, Ken Patton, Charles Perdue, and Ed Zadjura.

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